

Kibrom Girum

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Professional Summary

AI Research Scientist specialized in computer vision (CV), medical data analysis, deep learning (DL), and machine learning (ML). Proficient in multiple programming languages. Designed, implemented, validated, and disseminated AI-based medical image processing pipelines in radiology and oncology via GitHub, with publications in the top-ranked medical imaging domains. Currently focused on research and development of generic AI methods for medical image processing. Actively seeking new opportunities in the application of CV, DL, and ML techniques to medical domains.

Work Experience

Research Engineer, Institute Curie, **GE Healthcare, France** Oct 2023 - Oct 2025

- Developing and optimizing generative AI models for medical image synthesis and augmentation as part of the **AI DReAM** project at **GE HealthCare**

Data scientist, Institute Curie, France
University Paris-Saclay, LITO

Feb. 2021 - Aug. 2023

- Designed and developed automated ML/DL methods for 2D and 3D medical data analysis, biomarker extraction, and survival prediction
- Disseminated developed novel DL solutions via GitHub
- Integrated and maintained automated tumor segmentation model into LIFEx software using Docker image technology
- Secured top rankings (1st and 4th place) in medical image segmentation and survival prediction challenges at **MICCAI**.

Researcher in AI for Image-guided interventions, CGFL, **France**

2017-2020

- Designed and developed ML, DL, and CV automatic methods for image-guided prostate interventions using **ultrasound, MRI, and CT images**
- Designed and developed multi-modal 2/3D medical image processing using deep learning including **segmentation, classification and registration on organs including the HEART, PROSTATE, INNER EAR SURGERY**
- Published and presented peer-reviewed research in prestigious journals (IEEE TMI, JNM, MedIA) and top-tier conferences (ICARS, IPCAI, MICCAI, SNMMI)
- Taught deep learning courses to M2 Health AI at Université de Bourgogne

Software engineer in medical data managements, CGFL, **France** Feb. - Aug. 2017

- Designed and developed a tool for 2/3D medical image management and visualization in image-guided prostate interventions
- Proposed and developed supervised and unsupervised machine learning methods for detection, classification and segmentation applications

Education	PhD in AI for image-guided prostate interventions , UBFC, France 2017 - 2020 Deep learning, machine learning, CT, Ultrasound, Cardiac MRI, Echo-cardiography, Segmentation, Classification, Registration, Dosimetry analysis MSc in Computer Vision and Robotics Sep. 2015 - Aug. 2017 Universite de Bourgogne, France , Universitat de Girona, Spain , and Heriot-Watt University, United Kingdom Medical Images, Computer Vision, Software Engineering, Advanced Image Analysis BSc. Degree in Electrical and Computer Engineering sep.2008 - Jul. 2013 Communication Systems, VHDL Programming, Digital Systems
Publications	Summary in AI-driven medical imaging <ul style="list-style-type: none"> • Patent: 1, Journals: 10, Abstracts: 10, Conferences: 4
	Recent publications and projects
	<ul style="list-style-type: none"> • Girum KB et al. (2021), A deep learning method for real-time intraoperative US image segmentation in prostate brachytherapy. International Journal of Computer Assisted Radiology and Surgery, 2020, Link to DOI • Girum KB et al. (2023), Tumor Location Relative to the Spleen Is a Prognostic Factor in Lymphoma Patients. The Journal of Nuclear Medicine, 2023, Link to DOI • Girum KB et al. (2022), [18F] FDG-PET maximum intensity projections and artificial intelligence: a win-win combination to easily measure prognostic biomarkers in DLBCL patients. The Journal of Nuclear Medicine, 2022, Link to DOI • Girum KB et al. (2021), Learning With Context Feedback Loop for Robust Medical Image Segmentation IEEE Transactions on Medical Imaging, 2021, Link to DOI • Main Github project: https://github.com/KibromBerihu/ai4elife
Honours/ Awards	<ul style="list-style-type: none"> • Two international Alavi-Mandell Awards both in 2025 and 2023 , recognized for AI-aided biomarker extraction and segmentation on PET/CT images, respectively • Won Many MICCAI challenges including HECKTOR 2022 challenge survival prediction; Endovis SurgVisDom 2020; Pathological classification 2020 • Recipient of Erasmus Mundus Joint Masters Degrees scholarship, 2015-2017
Skills	Hard skills
	<ul style="list-style-type: none"> • Programming languages: Python, C/C++, Matlab • Deep learning framework: Pytorch, Tensorflow, Keras • Machine learning framework: Scikit-learn, Pandas, Scikit-image • Other technologies: Docker, Git, Qt/OpenCV